

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. After amending the claims as set forth above, claims 17-28 remain pending in this application.

Rejection of claims 17-18, 20, 22, and 26-27 based on Goplen and Bourne

Claims 17-18, 20, 22, and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,011,922 (“Goplen”) in view of U.S. Patent 2,297,046 (“Bourne”). The rejection is traversed for at least the following reasons.

Claim 17 (as amended) recites “a tubular member formed inside the muffler shell, wherein a portion of the tubular member is arranged inside the muffler shell on an upstream end of the muffler in a direction of exhaust flow [and] a resonator set protruding from and formed of the portion of the tubular member, wherein the resonator set is configured to attenuate acoustic energy of a second frequency band, which is different from the first frequency band and which modulates the first frequency band.” Goplen, Bourne, or any combination thereof does not teach or suggest this combination of features. For example, as the PTO correctly pointed out, Goplen does not teach or suggest a resonator set formed of the portion of the tubular member, wherein the resonator set is configured to attenuate acoustic energy of a second frequency band, which is different from the first frequency band and which modulates the first frequency band. (Paragraph 1 of the Office Action.) Bourne does not cure these deficiencies as detailed below.

One of the features of claim 17 is that the resonator set is formed of a portion of the tubular member which is formed inside the muffler shell. In contrast, Bourne primarily discloses structures of preventing shock excitation at places outside the muffler shell. (See reference numerals 4 and 5 (FIGS. 1-2); 12-14 (FIGS. 5-6); 18-20 (FIG. 7); 24-25 (FIG. 8); 31-34 (FIGS. 9-10); 41-46 (FIGS. 11-12); 52-53 (FIG. 13-14); 52-54 (FIG. 15); 56-57 (FIGS. 16-17); 60 and 62 (FIGS. 18-19); 64 and 68 (FIGS. 20-21); 91 (FIGS. 24-25); 97-98 (FIG. 26); 97 and 103 (FIG. 27); 104 (FIG. 28); 115-118 (FIG. 30); 122 (FIGS. 31-32); 125 (FIG. 33); and 134 (FIG. 34). FIGS. 22-23 of Bourne discloses a chamber 75 but there is no teaching or suggestion that a resonator set is protruding from and formed of a portion of the tubular member arranged on an upstream end of the muffler. FIG. 29 of Bourne applies to a chimney application, not a muffler. Thus, Bourne does not teach or suggest a resonator set protruding from and formed of a portion of a tubular member arranged in a muffler shell, and

cannot cure the deficiencies of Goplen. Accordingly, Goplen, Bourne, or any combination thereof does not teach or suggest all the features of claim 17.

Claims 18, 20, 22, and 26-27 depend from and contain all the features of claim 17, and are allowable therewith for at least the reasons above, without regard to the further patentable features contained therein.

For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Rejection of claims 19, 21, and 28 based on Goplen, Bourne, and Coulon

Claims 19, 21, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goplen, Bourne, and GB 2,365,066 (“Coulon”). Claims 19, 21, and 28 depend from and contain all the features of claim 17. As previously mentioned, any combination of Goplen and Bourne does not teach or suggest a resonator set protruding from and formed of a portion of a tubular member arranged in a muffler shell. Coulon does not cure these deficiencies. Thus, claims 19, 21, and 28 are allowable for at least this reason, without regard to the further patentable features contained therein. For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Rejection of claim 23 based on Goplen, Bourne, and De Lank

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goplen, Bourne, and EP 0445431 (“De Lank”). Claim 23 depends from and contains all the features of claim 17. As previously mentioned, any combination of Goplen and Bourne does not teach or suggest a resonator set protruding from and formed of a portion of a tubular member arranged in a muffler shell. De Lank does not cure these deficiencies. Thus, claim 23 is allowable for at least this reason, without regard to the further patentable features contained therein. For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Rejection of claim 24 based on Goplen, Bourne, Coulon, and De Lank

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goplen, Bourne, Coulon and De Lank. Claim 24 depends from and contain all the features of claim 17. As previously mentioned, any combination of Goplen and Bourne does not teach or suggest a resonator set protruding from and formed of a portion of a tubular member arranged

allowable for at least this reason, without regard to the further patentable features contained therein. For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Rejection of claim 25 based on Goplen, Bourne, Burdisso, and De Lank

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goplen, Bourne, U.S. Patent 6,112,514 ("Burdisso") and De Lank. Claim 25 depends from and contain all the features of claim 17. As previously mentioned, any combination of Goplen and Bourne does not teach or suggest a resonator set protruding from and formed of a portion of a tubular member arranged in a muffler shell. Burdisso and De Lank do not cure these deficiencies. Thus, claim 25 is allowable for at least this reason, without regard to the further patentable features contained therein. For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 4/26/2007

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